U.S. EPA Science Advisory Board
Arsenic Review Panel
Biosketches

Arsenic Review Panel

Aposhian, H. Vasken

The University of Arizona

Dr. H. Vasken Aposhian received a Sc. B. in Chemistry from Brown University and an M.S. and Ph.D. from the University of Rochester. He has been a faculty member of the Department of Pharmacology, Vanderbilt University College of Medicine; Department of Microbiology, Tufts University College of Medicine, and Department of Pharmacology, University of Maryland College of Medicine. Since 1975, he has been Professor of Molecular and Cellular Biology and Professor of Pharmacology at the University of Arizona. He has extensive research experience and publications dealing with the toxicology of heavy metals, in particular arsenic and mercury. This has included enzymology of arsenic biotranformation; the study of human populations in Chile, Inner Mongolia, Romania, Mexico and rural Southwest China as to their body burden of arsenic or mercury; the human metabolism of chelating agents; and the biochemical genetics in particular gene transfer in mammalian cells. His laboratory, at present, is searching for biomarkers for autism using the latest proteomic techniques and trying to decipher the polymorphisms in the human gene for human glutathione-S-transferase-omega a crucial enzyme that reduces arsenic species. His teaching responsibilities involve teaching human toxicology to a small class of seniors. Dr. Aposhian is a member of the Society of Toxicology; The American Society Of Biological Chemistry And Molecular Biology; and the AAAS. He has recently given invited seminars at the EPA, the Health Realties Institute, WHO/NIEHS meeting on Environmental Health of Children in Central Asia held in Amity, Kazakhstan, Grand Rounds of the Tucson Medical Center and the Canadian Chemistry Conference. Dr. Aposhian is on the Editorial Board of the American Chemical society journal Chemical Research. He participated in the writing of the NAS/NRC monographs on “Arsenic in Drinking “Toxicology Of Methyl Mercury”. He has served on numerous NIH, EPA and FDA ace Research Foundation (NIEHS) and the Autism Research.

Barchowsky, Aaron

University of Pittsburgh

Dr. Aaron Barchowsky is an Associate Professor in the University of Pittsburgh Graduate School of Public Health’s Department of Environmental and Occupational Health. He also serves as the Director of the newly formed Pittsburgh Environmental Health Sciences Program and the University of Pittsburgh Center for the Environmental Basis for Human Disease. He received a Bachelor of Science degree in Zoology (1978) from North Carolina State University and a Ph.D in Pharmacology from Duke University (1984). After a fellowship in the Integrated Toxicology Program at Duke, he joined the faculty in Clinical Pharmacology at Thomas Jefferson University in Philadelphia, where he directed the Laboratory for Investigative Medicine. In 1991, he joined the faculty in Pharmacology and Toxicology at Dartmouth Medical School, where he remained for 12 years before coming to Pittsburgh. Dr. Barchowsky has published over 60 manuscripts with a major emphasis on in vivo and cell culture based investigations of oxidant and metal-sensitive cell signaling mechanisms and gene activation in vascular cells and pulmonary epithelium. For the past 10 years, he has been a project leader in the Dartmouth College Superfund Basic Research Program investigating mechanisms for arsenic-induced vascular disease. His other work has focused on the cellular and molecular actions of chromium and nickel in the lung. All of his funding in the past 10 years has been from either the National Heart Lung and Blood Institute or the National Institute of Environmental Health Sciences.Dr. Barchowsky has served on numerous review panels for the American Heart Association and the National Institutes of Health. He was a standing member of the Alcohol and Toxicology study section 1 before it disbanded and currently serves as the toxicologist on the Vascular Cell and Molecular Biology Study Section. He also served on the National Academies of Science, Committee on the Framework for Evaluating the Safety of Dietary Supplements; Chromium Picolinate I Working Group. He is a member in good standing with a variety of scientific societies, including the Society of Toxicology. He was recently awarded Best Paper of the Year from this society for a paper entitled “Arsenic stimulates angiogenesis and tumorigenesis in vivo.”

Brusick, David

Convance Labs

Dr. Brusick is currently Global Vice President of Resource Management at Covance Laboratories, North America and prior to that was Global Vice President of Mammalian Toxicology. Dr. Brusick was awarded his doctoral degree in genetics by Illinois State University in 1970, and was awarded a postdoctoral research position as a National Academy of Sciences research associate at the Food and Drug Administration's Genetic Toxicology Branch. Dr. Brusick is past president of the U.S. Environmental Mutagen Society (1978-79) and is adjunct associate professor of microbiology and genetics at Howard University Medical School and George Washington University, respectively. He is the author of over 100 scientific publications, including a textbook, Principles of Genetic Toxicology (Second Edition, 1987); was the editor of In Vitro Toxicology (1988-1993), a journal of cellular and molecular toxicology; and edited a volume entitled Method for Genetic Risk Assessment. Dr. Brusick has ser! ved as a member of numerous NAS committees and chaired an NAS/NRC subcommittee on the role of DNA adducts in toxicology testing. He was chairman of the International Commission for the Protection Against Environmental Mutagens and Carcinogens and a member of the Technology Transfer Committee for the Center for Alternative to Animal Testing at John Hopkins University. Dr. Brusick is a fellow of the Academy of Toxicological Sciences. His interests include basic and applied research in mutagenic and carcinogenic mechanisms and the application of biotechnology techniques to safety testing method development.

Cantor, Kenneth P.

National Cancer Institute

Dr. Kenneth Cantor is a Senior Investigator in the Occupational and Environmental Epidemiology Branch, Division of Cancer Epidemiology and Genetics, National Cancer Institute (NCI). He holds a Ph.D. in Biophysics (U.Calif., Berkeley, 1969) and an M.P.H. (Harvard School of Public Health, 1973). Since 1981, Dr. Cantor has conducted a program at NCI of research into the relation between exposure to occupational and environmental factors and risk of cancer. He has published several papers on the relation between pesticide exposure and risk of cancer, especially hematopoietic malignancies. In recent years, his primary research focus has been carcinogens in drinking water, in particular, disinfection byproducts, arsenic, and nitrate. He has published over 150 original research and review articles on these and related topics. Dr. Cantor has served on numerous scientific advisory and oversight committees related to evaluation of contaminants in drinking water and has been active with many professional organizations and journals involved with environmental and occupational epidemiology. He has been a contributing member of several National Research Council Committees and Subcommittees concerned with water-related health issues. Among these Committees are: Water Supply Review Committee (1978-1981); Complex Mixtures Committee (1985-1987) ; Subcommittee on Arsenic in Drinking Water (1997-1999); Subcommittee to Update the NRC Report on Arsenic in Drinking Water (2001); Committee on Research Priorities for Earth Science and Public Health (2004-present). He has consulted for international organizations, including the Pan American Health Organization, Health Canada, and the International Agency for Research on Cancer (IARC). Among the Federal advisory boards on which he as served are: Fluoride Risk Work Group, Public Health Service (1990-1); Subcommittee on Drinking Water & Health, Public Health Service (1995-7), and the Camp Lejeune Expert Panel, ATSDR/CDC (2005). He was a member of the Science Advisory Board for the Santa Ana River Water Quality and Health Scientific Advisory Board from 1996 to 2004 , and has served on advisory groups of other local water and health authorities. Dr. Cantor has held elective office on the Boards of the Society for Occupational and Environmental Health (1988-90) and the International Society for Environmental Epidemiology 1998-2000. He is an Associate Editor for the American Journal of Epidemiology and frequently serves as a peer reviewer for this and numerous other scientific journals. Dr. Cantor's current research is directed toward improving our understanding of the effects of chronic exposure to drinking water contaminants, and the influence of genetic factors in modulating those effects. Dr. Cantor was one of the first to develop methods to estimate historical exposure to disinfection byproducts in drinking water for use in epidemiologic studies. Currently, he directs the environmental exposure group for a large case-control study of bladder cancer in northern New England, where relatively low-level exposures to arsenic and disinfection byproducts in drinking water are of special interest. In collaboration with CDC, he recently conducted a clinical study of the effects of showering on levels of trihalomethanes in blood, with special focus on genetic and metabolic factors that may modulate internal exposures to these compounds.

Colford, John (Jack)

University of California

Jack Colford, MD PhD is an Associate Professor of Epidemiology at the University of California, Berkeley, School of Public Health. He is a graduate of the Johns Hopkins School of Medicine (MD 1985) and the UC Berkeley School of Public Health (PhD, Epidemiology, 1996). He completed a residency in Internal Medicine and a fellowship in Infectious Diseases at the University of California, San Francisco. He was Chief Medical Resident at Stanford University Hospital. He is board-certified in both Internal Medicine and Infectious Diseases and is also an Attending Physician at the San Francisco VA Medical Center Infectious Diseases clinic. Dr. Colford is the sole instructor in semester-long courses in advanced epidemiologic methods, intervention trial design, and meta-analysis and has received several teaching awards. He has taught for many years as a visiting professor each summer at the University of Michigan (meta-analysis) and the University of Zurich, Switzerland (epidemiologic methods). Dr. Colford has been an author of more than 40 peer-reviewed scientific publications, including numerous peer-reviewed articles on the health effects of waterborne diseases. He has received more than $11.0 million in research funding. He is the Principal Investigator of four triple-blinded, randomized controlled trials of drinking water and health effects funded by the National Institutes of Health, the Centers for Disease Control, and the Environmental Protection Agency, and the University of California. These have included large trials in the United States as well as a drinking water study in 22 villages now underway in Bolivia. He was the Principal Investigator of the Mission Bay Epidemiology study of the health effects of recreational water exposure, funded by the California Regional Water Quality Control Board. He was asked by an NRC committee to review all health evidence of associations between recreational water indicators and health outcomes. Dr. Colford recently returned to UC Berkeley after a one year sabbatical at the World Health Organization (Water, Sanitation, and Health Division) in Geneva, Switzerland where he collaborated with the World Bank in a published monograph and peer-reviewed manuscript evaluating the effectiveness of drinking water treatments throughout the world.

Dragan, Yvonne P.

Food and Drug Administration

Dr. Yvonne P. Dragan is currently Director of the Division of Systems Toxicology (DST) and Chief of the Center for Hepatotoxicology at the Foodand Drug Administration's (FDA) National Center for Toxicological Research (NCTR) located on the campus of the Jefferson Laboratories of the FDA inJefferson, Arkansas. The DST was established in September 2004 to provide an integrated and iterative assessment of the toxicity of agents based onthe holistic analysis of OMICs (genomics, transcriptomic, proteomic and metabolomic) analyses and classic toxicology endpoints.The Division is currently applying an integrated, state-of-the-art OMICs platform (consisting of microarray, nuclear magnetic resonance (NMR)- and massspectrometry (MS)-based metabolomic and proteomic signatures) in order to perform analyses of compounds-of-interest to the FDA and to provide thetechnical expertise to the Agency in genomic, proteomic and metabolomic interpretation and guidance. Dr. Dragan is recipient of the 2005 FDA Leveraging/Collaboration Award for developing collaborative relationships within the FDA and beyond to industry to harness the potential of technologyin advancing the understanding and assessment of genomic data submissions. In addition, Dr. Dragan serves an Adjunct Associate Professor for theUniversity of Arkansas for Medical Sciences' Interdisciplinary Toxicology (INTOX) Program. Dr. Dragan received her B.A. in Biology from Smith College in Northhampton, Massachusetts (1981) and her Ph.D. in Pharmacology and Toxicology from the Medical College of Virginia, Richmond, Virginia (1988). Prior to establishing a liver toxicology laboratory at NCTR (2001). Dr. Dragan was on the faculty at the Ohio State University, College of Medicine and Public Health, School of Public Health (1998-2001); and a research scientist at the McArdle Laboratory for Cancer Research, University of Wisconsin (1991-1998). From 1988-1991, she held a Postdoctoral Fellowship in Chemical Carcinogenesis at the McArdle Laboratory for Cancer Research, University of Wisconsin. Dr. Dragan is a member of the Society of Toxicology (SOT), American Association for Cancer Research, Society of Toxicologic Pathology, American Society for Pharmacology and Experimental Therapeutics and the American Association for the Study of Liver Disease. She is an elected member of the SOT Council (2004-2005) and has served as President, Vice-President, Vice-President Elect and Secretary-Treasurer for the SOT Carcinogenesis Specialty Section (1994-2001). Dr. Dragan has served on numerous committees to include FDA's Interdisciplinary Pharmacogenomic Review Group and the Environmental Protection Agency's (EPA) Environmental Carcinogenesis Division Site-Visit Team (1998; 2004), Draft Cancer Risk Guidelines, Federal Insecticide, Fungicide, and Rodenticide Act Scientific Advisory Panel (2003), Scientific Advisory Board on Drinking Water (1998-2001); International Life Sciences Institute (ILSI) Panels on Chloroform (1996-1997), Fumonisin (1999-2000), Workshop on Mode of Action in Rodent Liver Tumors for Human Cancer Risk Assessment (2004); National Toxicology Program Board of Scientific Counselors (2000-2001).

Green, Sidney

Howard University

Dr. Green is an Associate Professor of Pharmacology at the Howard University College of Medicine in Washington D.C. He received his Ph.D. from Howard University in Pharmacology in 1972. He has held previous positions at Covance Laboratories, Inc, Vienna VA as Director of Toxicology, the Food and Drug Administration as Director Division of Toxicological Research, Associate Director for Laboratory Investigations, Chief Whole Animal Toxicology Branch, and Chief Genetic Toxicology Branch. He has also served as Chief of the Toxic Effects Branch in the old Office of Toxic Substances at the EPA. He has over seventy publications primarily in genetic toxicology, short-term test methodology and policy issues associated with alternatives to toxicological animal tests. He also has expertise in systemic toxicology related to food additives and contaminants. He has received the FDA Commissioner's Special Citation, two Group Recognition Awards and twice received the FDA Award of Merit once as a group award and singularly. It is the highest honor the agency can bestow on employees. He has served on numerous National Academy of Sciences review committees and currently is a member of the Committee on Toxicology. He is a past President of the American College of Toxicology, a Fellow of the Academy of Toxicological Sciences and a member of its Board of Directors, a member of the Society of Toxicology, Environmental Mutagen Society, Society for In Vitro Biology, Organization of Black Scientists and the Association of Government Toxicologists. He is a past Chairman of the Membership Committee and of the Council of the Society of Toxicology. He is on the editorial boards of the Journal of Applied Toxicology, Human and Ecological Risk Assessment, Human and Experimental Toxicology and the Journal of Toxicology-Cutaneous & Ocular Toxicology.

Harlow, Sioban

University of Michigan

Siobán D. Harlow, B.A., (Health Arts and Sciences), University of California, Berkeley; Ph.D., (Epidemiology), Johns Hopkins School of Hygiene and Public Health, is Professor of Epidemiology, Department of Epidemiology, School of Public Health, University of Michigan, Associate Director of the International Institute, and Director of the Advanced Studies Center at the University of Michigan. She is a member of the Scientific and Technical Advisory Group of the Reproductive and Health Research Division of the World Health Organization. Previously she served on the Committee on the Use of Third Party Toxicity Research for Human Research Participants for the Science, Technology and Law Program of the National Academy of Sciences. She has served on numerous grant review panels for NIEHS, NIOSH, NICHD, NSF and the Workplace Safety and Insurance Board of Ontario. Her research focuses on reproductive, perinatal and occupational epidemiology in developing countries. In collaboration with El Colegio de Sonora, she co-founded the Programa de Formación de Investigadores en Salud Reproductiva to foster the development of human resources in reproductive health research in the US-border region of Mexico with support from the Fogarty International Center, under whose auspices she recently hosted the International Workshop on Environmental Health in Latin America: Developing a Gender Perspective. Dr. Harlow's memberships include Phi Beta Kappa, Delta Omega, North American Menopause Society and the Society for Epidemiologic Research.

Heeringa, Steven

University of Michigan

Steven G. Heeringa is the Director of the Division of Surveys and Technologies at the University of Michigan Institute for Social Research (ISR) where he oversees research design and operations for population-based studies in the social sciences, education, demography, public health and medicine. Steve has a Ph.D. in Biostatistics from the University of Michigan and is a specialist in statistical design and analysis for studies of human and animal populations. Steve Heeringa has over twenty-five years of statistical sampling experience directing the development of the ISR National Sample design as well as sample designs for ISR's major longitudinal and cross-sectional survey programs. During this period he has been actively involved in research and publication on statistical methods and procedures such as sample design methods and procedures, such as weighting, variance estimation and the imputation of missing data that are required in the analysis of sample survey data. He is an advisor to panels of the National Institutes of Health (NIH) and the World Health Organization (WHO). Since 2000, Steve has served as an ad hoc member of more than 10 EPA Scientific Review panels. He has been a teacher of survey sampling methods to U.S. and international students and has served as a sample design consultant to a wide variety of international research programs based in countries such as: Russia, the Ukraine, Uzbekistan, Kazakhstan, India, Nepal, China, Iran, Chile and Egypt.

Hopenhayn, Claudia Maria

University of Kentucky

Dr. Claudia Hopenhayn is an associate professor in the Department of Epidemiology, College of Public Health, at the University of Kentucky. She holds a degree in Spanish-English Translation from the Universidad del Salvador, Buenos Aires, Argentina (1979), and from the University of California, Berkeley she obtained a B.A. in Physical Education (1986), an MPH in epidemiology/biostatistics (1989) and a PhD in Epidemiology (1996). Her general areas of expertise include environmental/occupational epidemiology, particularly cancer and reproductive outcomes, and cancer surveillance and control epidemiology. From a more specific and relevant viewpoint, Dr. Hopenhayn's research work on arsenic-related health studies has spanned over 15 years, ranging from studies of cancer to reproductive outcomes to methylation studies, including both descriptive and analytic investigations, across various populations in several countries. As a result, Dr. Hopenhayn has authored and co-authored numerous arsenic publications as well as being invited as a guest speaker to many national and international presentations, and served as peer reviewer for many submitted articles on arsenic work. Dr. Hopenhayn served as consultant in a short term appointment for the World Health Organization to evaluate an arsenic project in Inner Mongolia, China (2000) and as member of an advisory task group on Arsenic and Arsenic Compounds for the International Program on Chemical Safety, WHO (1999-2000), which resulted in an Arsenic Environmental Health Criteria Document (2001). She also served as expert consultant for the National Academy of Sciences for their 2001 Review of Arsenic in Drinking Water. In addition, Dr. Hopenhayn has served in two EPA/SAB FIFRA panels, one on the evaluation of certain arsenic compounds used primarily on treated wood (CCA) (2001), and another one on atrazine (2003). She currently serves as a member of the external review committee to the University of Arizona's Superfund research program, and as a member of the Institute of Medicine's Committee on Veterans and Agent Orange. Dr. Hopenhayn most recent funding sources include the EPA, CDC and ACS.

Klaunig, James E.

Indiana University

Dr. James E. Klaunig is Professor of Toxicology and Director of Toxicology in the Department of Pharmacology and Toxicology at Indiana University, School of Medicine. He received his B.S. degree from Ursinus College in Collegeville, Pennsylvania, an M.A. from Montclair State University, Montclair, New Jersey, and his Ph.D. from the University of Maryland in Baltimore, Maryland. He is the recipient of numerous awards, including Fellow of the Academy of Toxicological Sciences; the Otis R. Bowen M.D. Distinguished Leadership Award, Indiana University School of Medicine; the Kenneth P. DuBois Award from the Midwest Society of Toxicology, and the Sagamore of the Wabash award from the governor of Indiana. He is editor-in-chief of Toxicologic Pathology Journal, serves as associate editor of Toxicological Sciences, and is on the editorial board of Toxicological Pathology. He is a member of the National Toxicology Program Board of Scientific Counselors for the National Institutes of Health, National Institute of Environmental Health Sciences. He also has served as president of the Carcinogenesis Specialty Section, president of the Ohio Valley Society of Toxicology, member and chair of the Education Committee, and member of the finance and program committees of the Society of Toxicology. He is currently the treasurer of the Society of Toxicology. He also serves the State of Indiana on the Indiana Pesticide Review Board, the Governor's Council on Impaired and Dangerous Driving, and the Indiana Controlled Substances Advisory Board. He has trained more than fifty graduate students and postdoctoral fellows. His research interests are dedicated to understanding the mechanisms of chemically induced carcinogenesis, specifically the mode of action of nongenotoxic carcinogens; understanding the role of oxidative stress in carcinogenesis and cell injury, and understanding the multistage nature of the cancer process.

Le, X. Chris

University of Alberta

Dr. Le received his BSc (Honours) from Wuhan University, China, an MSc in Environmental Chemistry from Chinese Academy of Sciences, Beijing, a second MSc in Analytical Chemistry from Brock University, and PhD from the University of British Columbia. He was a Killam Post-doctoral Fellow in the Department of Chemistry, University of Alberta prior to joining the Department of Public Health Sciences in February 1995. His current research activities within environmental health sciences include: development of ultra-sensitive assays for environmental contaminants using state-of-the-art analytical techniques, such as capillary electrophoresis, laser-induced fluorescence, immunoassay, chromatography, atomic and mass spectrometry; exposure, metabolism, and health effects of arsenic; DNA-protein interactions; chemical speciation; and assessment of human exposure to carcinogens using DNA damage and protein adducts as biomarkers. He currently receives research funding from the Natural Sciences and Engineering Research Council (NSERC, Canada), American Water Works Association Research Foundation (AWWARF, USA), the Environmental Protection Agency (USA), National Institutes of Health (USA), National Cancer Institute (USA), Canadian Water Networks/ NCE, and Alberta Health and Wellness. He has been awarded an E.W.R. Steacie Fellowship (2000-2001) by NSERC, a Martha Cook Piper Research Prize (2000) by the University Of Alberta, and a McBryde Medal (2002) by the Canadian Society for Chemistry. He is an elected fellow of the Chemical Institute of Canada. He is a Canada Research Chair (Tier II).

Matanoski, Genevieve Chair

Johns Hopkins University

Dr. Genevieve Matanoski is a Professor of Epidemiology at the Johns Hopkins University Bloomberg School of Public Health in Baltimore, Maryland. For a time after medical school she pursued a career in pediatrics and general preventive medicine. After earning a doctor of public health degree, she was appointed to the faculty of Johns Hopkins University and has been a professor since 1976. In addition to teaching and research, Dr. Matanoski has held appointments in a number of teaching and training programs in the United States and abroad and is a frequent advisor to legislative and policy making groups. She is a member of several scientific advisory bodies both for governmental agencies and for industry. She is a past chair of the EPA Science Advisory Board as well as a past chair of the SAB Radiation Advisory Committee. During her tenure on the EPA SAB, Dr. Matanoski was involved in the writing of several documents produced by the SAB to provide advice to EPA including the Beyond the Horizon: Using Foresight to Protect the Environmental Future and Toward Integrated Environmental Decisionmaking. She is the author or co-author of more than 80 publications. Dr. Matanoski's work has focused on the epidemiology of cancer, including bladder, lung, skin and uterine cancers, and leukemia. Her research studies have examined the risks associated with occupational and environmental exposures to such agents as radiation, electromagnetic fields, and chemical substances such as styrene, butadiene, arsenic and environmental tobacco smoke. Recent research has emphasized reproductive effects and congenital malformations from environmental exposures. Her early work involved infectious diseases and illnesses in infants and children. Dr. Matanoski received a B.A. degree in chemistry at Radcliffe College and an M.D. at the Johns Hopkins School of Medicine and a doctor of public health degree from the Johns Hopkins University School of Hygiene and Public Health.

Medinsky, Michele

Toxcon

Dr. Michele A. Medinsky is currently a toxicological consultant to clients in the private and public. She received a Ph.D. degree in biology from the University of New Mexico in 1980. dissertation research on the "Metabolic Fate of Inhaled Selenious Acid and Elemental Selenium Aerosols" was conducted at the Inhalation Toxicology Research Institute (ITRI) in Albuquerque, NM. Following a 2-year postdoctoral fellowship at the Chemical Industry Institute of Toxicology (CIIT) in Research Triangle Park, NC, she was employed from 1982 to 1989 as a toxicologist at ITRI. research involved assessment of the toxicity of inhaled gases and vapors, investigation of biochemical mechanisms of toxicity of inhaled materials, disposition of xenobiotics after various routes of administration including inhalation, and the development of physiologically based From 1989 to 1998 she was a scientist in the Chemical Carcinogenesis Program at CIIT. Her research at CIIT continued to focus on the toxicapplication of physiological dosimetry models toward understanding the mechanisms of action of She is the author or co-author of 90 peer-reviewed publications and 38 Dr. Medinsky has been a Diplomate of the American Board of Toxicology since 1983, and was most She is a member of the Society of Toxicology (SOT), where she was elected to the Education Committee, appointed to the Public Communications Committee and Tox90's Education Task Force and elected President of the Inhalation Specialty Section. served on the editorial boards of a number of toxicology journals including Toxicology, Fundamental and Applied Toxicology, Journal of Toxicology and Envronmental Health, Environmental Health Perspectives, Toxicology and Applied Pharmacology, and Research Communications in Toxicology. She has served on several advisory boards, including Toxicology Study Section of the National Institutes of Health, the Committee on Toxicology of the National Research Council, the U.S. Environmental Protection Agency (EPA), Science Advisory Board, the National Toxicology Program Board of Scientific Counselors Subcommittee on the Report on Carcinogens and the Subcommittee on Technical Reports, the North Carolina Association for Biomedical Research, and as an ad hoc member of the FIFRA Science Advisory Panel of the EPA.

Portier, Kenneth M.

University of Florida

Dr. Kenneth M. Portier is Associate Professor of Statistics and Agricultural Experiment Station Statistician in the Institute of Food and Agricultural Sciences at the University of Florida. Since 1979, he has worked primarily as a statistical consultant to researchers in agriculture, natural resources and the environment and as a teacher of statistical methods to graduate students in agriculture, ecology, environment and natural resources associated disciplines. Widely sought after for graduate committees, Dr. Portier has coauthored publications in many of the premier journals in agriculture, natural resources and environmental sciences and in 2003 was named a NACTA teaching fellow. He is a regular participant of US EPA and National Toxicology Program science advisory panels reviewing human and ecological risks from agriculture-related chemicals and practices. In 2004 he was appointed to membership on the EPA SAP. His research interests are in applied statistics, biostatistics, statistical computing and the teaching of statistics. In collaboration with other researchers at UF, Dr. Portier is Co-PI on research grants from NSF, USDA, NOAA and DOI.

Rosen, Barry

Wayne State University

Dr. Barry P. Rosen is Professor and Chairman of the Department of Biochemistry and Molecular he was Professor in the Department of Biological Chemistry at the University of Maryland School of He received his B.S. degree (1965) from Trinity College, Hartford, CT, M.S. (1968) and Ph.D. (1969) from the University of Connecticut. He was an NIH fellow at Cornell Dr. Rosen's honors include Basil O'Connor Awardee, March of Dimes, 1974-1976; Maryland Distinguished Young Scientist Award, 1979; Josiah Macy, Jr. Faculty Scholar, 1980-1981; Honorary Professor, 1991, Academia Sinica, Institute of Zoology, Beijing, China; Distinguished Faculty Fellow, Wayne State University, 1997; Outstanding Graduate Mentor Award, Wayne State University; 1999; Dr. Rosen is a member of the editorial boards of the Journal of Biological Chemistry, Biometals, Drug Resistance Updates. He was formerly on the editorial board of the Journal of Bacteriology and Microbiological Reviews member of grant advisory committees for NIH, NSF, American Heart Association, Canadian Foundation for Innovation, and the Veterans Administration. He has organized numerous international meetings, including chairing a 2004 Gordon Research Conference. 230 papers, reviews and chapters. Dr. Rosen is a sought-after speaker and, over the last two decades has given more than 200 presentations at universities, national and international symposia Dr. Rosen's research accomplishments span four decades. His laboratory focuses on the mechanisms of gene regulation, transport and detoxification of toxic metals, including arsenic, antimony, copper, cadmium and lead. He has elucidated the pathways for arsenic detoxification in prokaryotes and eukaryotes, including the first identification of the pathway of arsenic uptake in human cells such as those in the blood-brain barrier. He identified the transporter that takes up the arsenical drug Trisenox that is used to treat leukemia. He has genetically engineered both plants and microorganisms for arsenic bioremediation of soil and water (patent pending). He has cloned, expressed and characterized many enzymes and proteins of arsenic metabolism, including arsenic reductases, methylases and transcription factors, and has determined the three-dimensional structure of several. Dr. Rosen is currently funded by four active NIH grants, two from the National Institute of General Medical Sciences on arsenic biochemistry and transport, a third from the National Institute of Allergy and Infectious Diseases on heavy metal regulation of gene expression, and a fourth from the National Institute of Environmental Health Sciences on genetic/epigenetic susceptibility to superfund.

Rossman, Toby

New York University

Dr. Toby Rossman is Professor of Environmental Medicine and Director of Molecular Toxicology and Carcinogenesis Program. He holds a Ph.D. in Basic Medical Sciences from NYU School of Medicine (Microbiology and Biochemistry specialization) and did a postdoctoral in Pathology. He has published widely on various aspects of metal toxicology and carcinogenesis, with most of his recent work on arsenic. He developed the first animal model for arsenic-induced skin cancer. He has written numerous reviews on arsenic. He served on the Chemical Pathology Study Section (NIH) (ad hoc), the National Toxicology Program (NTP) Study Section to review proposals for contracts, the American Cancer Society Study Section (Genetics), twice on the Environmental Health Sciences Review Committee (NIEHS), NIH Small Business Grants (Genetics) study section, and the Metabolic Pathology Study Section (NIH). He serves on the editorial boards of Environmental and Molecular Mutagenesis and Mutation Research, and previously of Molecular Toxicology and Teratogenesis, Carcinogenesis and Mutagenesis. He is an active member of the Environmental Mutagen Society (EMS), Society of Toxicology (SOT), and American Association for Cancer Research (AACR). He participated in the Workshop "Environmental restoration: Significant basic research needs", U.S. Department of Energy, 1990 and the International Agency for Research in Cancer (IARC) review of the carcinogenicity of metals, Lyon, France, 1993 and again in 2004. He organized and chaired the session on mechanisms of carcinogenesis at the NIH/EPA meeting "Arsenic: Health Effects, Mechanisms of Action, and Research Issues", Baltimore, Sept. 22-24, 1997. He was co-organizer of the First, Second, and Third International Meetings on Molecular Mechanisms of Metal Toxicity and Carcinogenicity. In 2003, he edited a Special Issue of Mutation Research devoted to Metals and Carcinogenesis. I am currently on the Council of the Metal Specialty Section of SOT, and on the Program committee for the 9th Symposium of Metals in Biology and Medicine to be held in Lisbon in 2006. He has received almost 30 years of federal funding for my research, mostly from NIH. His current support is from the Superfund Basic Research Program.

Styblo, Miroslav

University of North Carolina

Dr. Stýblo is a Research Associate Professor in the Department of Nutrition, School of Public Health, University of North Carolina (UNC) at Chapel Hill. He received his Graduation Diploma in biochemistry from the Kharkov State University, Ukraine (USSR), in 1980 and his CSc. (an equivalent of Ph.D.) degree in biochemistry from the Czechoslovak Academy of Sciences in 1988. In addition to his primary appointment in the Department of Nutrition, Dr. Stýblo is also a Faculty member in the Curriculum in Toxicology, in the Center for Environmental Medicine, Asthma, and Lung Biology, and in the Center for Environmental Health and Susceptibility of UNC Chapel Hill. Dr. Stýblo's professional background is in the area of metallobiochemistry, nutritional biochemistry, and molecular toxicology of metals and metalloids. In recent years, his work has focused primarily on metabolism of arsenic and on molecular mechanisms underlying toxicity and adverse health effects associted with environmnetal and occupational exposures to arsenic. He was a member of the Scientific Advisory Panels for the Federal Insecticide, Fungicide, and Rodenticide Act (US EPA) that evaluated health risks associated with exposure to chromated copper arsenate (CCA)-treated wood in 2001 and 2003. He was also a member of several special emphasis and review panels for the National Institute of Environmental Health Sciences. Dr. Stýblo's other professional interests include metabolic interactions between micronutrients and environmental pollutants; the role of antioxidants in responses to the oxidative stress induced by exposure to environmental toxins, by viral infections or nutritional deficiencies, and the role of metabolism in modulation of therapeutic effects of metal-based anticancer drugs, especially arsenic trioxide. He has authored or co-authored 59 papers, 46 of which were published in peer-reviewed journals. Dr. Stýblo's research has been funded by grants from the US EPA/STAR program and from the National Institutes of Health/NIEHS, and by a research contract from the European Commission. The general topics of these grants include: arsenic-induced oxidative stress and oxidative stress-sensitive transcription factors in human cells, molecular mechanisms of diabetogenic effects of chronic arsenic exposure, enzymology of arsenic methylation in human liver, and the role of genetic polymorphism in the inter-individual variation in arsenic metabolism in humans.

Teeguarden, Justin

Pacific Northwest National Laboratory

Dr. Teeguarden received his Ph.D. in 1999 from the University of Wisconsin, Madison in Toxicology studying multistage carcinogenesis and went on to private industry to develop physiologically based (PBPK) and compartmental pharmacokinetic models for a variety of compounds including the metal manganese. Most of these models were used to evaluate the relationship between external exposure, target tissue dose and response in support of risk assessment activities. The motivation has been that quantitative models of dose-response that characterize the underlying physiological and biochemical processes are more sound, more flexible platforms for conducting interspecies, dose and dose-route extrapolations. Justin now works as a Senior Research Scientist at the Pacific Northwest National Laboratory in Richland, WA, where he came to continue following interest in the fundamental biology underlying dose-response relationships by developing models of signaling networks involved in important human environmental diseases. He has served as a vice president and president elect for the Dose Response Specialty Group of the Society of Risk Analysis for the DRSG, has received several poster and best manuscript awards from the Society of Toxicology and the Society of Risk Analysis for work advancing the risk sciences. He has also served as a member of the EPA's STAR grant review panel (Computational Toxicology). Dr. Teeguarden current research involves developing an integrated systems biology directed research program in particulate matter on respiratory health, but continues to consult both for the U.S. EPA and private companies on developing and applying PBPK models and other dosimetry approaches supporting risk assessments.

Waalkes, Michael

National Institute of Environmental Health Science

Dr. Michael P. Waalkes is a research toxicologist with the National Cancer Institute (NCI). Dr. Waalkes received his Ph.D. in 1981 in Pharmacology and Toxicology from West Virginia University. His thesis involved the study of the perinatal toxicology of cadmium. He was a Postdoctoral Fellow at University of Kansas School of Medicine, Department of Pharmacology, Toxicology and Therapeutics from 1981 to 1983 to where his studies focused on the cellular and molecular mechanisms of acquired tolerance to metal toxicity. In 1983 he joined the National Cancer Institute, where he is now Chief of the Inorganic Carcinogenesis Section which is part of the Laboratory of Comparative Carcinogenesis. From 1983 to 1996 he was located at the Frederick Cancer Research Center in Frederick, Maryland. In 1996 he and his section were detailed to Research Triangle Park to become NCI at the National Institute of Environmental Health Sciences (NIEHS) where he currently is stationed. His current research involves defining the mechanisms of action of the carcinogenic inorganics, including arsenic, lead and cadmium. Dr. Waalkes received the Society of Toxicology Achievement Award for Outstanding Contributions to the Science of Toxicology by an Individual 41 Years of Age or Younger in 1990. In 2000 he received the National Institutes of Health Merit Award for exemplary service as a member of the NIEHS, National Toxicology Program (NTP) Committee for the Report on Carcinogens. From 1989 to 1996 he served as Professor of Toxicology, within the University of Maryland, Environmental Toxicology Program. He was part of the External Advisory Board of the Southwest Environmental Health Sciences Center, University of Arizona from 1992 to 2000. In 2000 he was appointed as Editor of Toxicology and Applied Pharmacology, a leading journal in mechanistic toxicology, and serves on the Editorial Boards of Toxicology, Journal of Toxicology and Environmental Health, and Toxicology Mechanisms and Methods. He has served on various review committees including those involving the International Agency for Research on Cancer, the National Science Foundation, various study sections, and the NTP Report on Carcinogens. He is an active member of the Society of Toxicology and has served on the Program Committee, the Board of Publications, the Committee on Public Communications, the Education Committee, as Metals Specialty Section President and as the North Carolina Regional Section President. He has chaired numerous symposia and continuing education courses involving metals toxicology as the SOT annual meetings. Dr. Waalkes is author or co-author of over 250 peer-reviewed publications and book chapters.

Yager, Janice
Electric Power Research Institute
Dr. Janice W. Yager is Research Program Manager, Occupational Health Research and Senior Research Manager, Air Quality and Health Research in the Environment Division of the Electric Power Research Institute (EPRI), a private non-profit research institute located in Palo Alto, California. She received a B.S. degree in Biomedical Sciences from the University of Wisconsin, Madison, and an M.P.H. and Ph.D. in Environmental Health Sciences from the University of California at Berkeley. Prior to joining EPRI in 1990, Dr. Yager served as Research Toxicologist in the Department of Environmental Health Sciences, School of Public Health, University of California, Berkeley where she conducted research on development and application of biomarkers for exposure assessment and early reversible effects in the human population focusing principally on novel cytogenetic methods. Dr. Yager is certified by the American Society of Clinical Pathology in Clinical Laboratory Sciences and licensed in the state of California. She served as Visiting Scientist via competitive one-year award from the Fogarty International Center of NIH to the Academy of Finland. There she continued work in biomarker research at the Institute of Occupational Health in Helsinki, Finland. Her current research interests are in the areas of toxicology, exposure assessment, and risk assessment, with particular interest in arsenic. She has served as an invited member on state and national scientific advisory committees including those for US EPA, NIH, NIOSH, ATSDR, and ACGIH. Dr. Yager also served as a member of the External Program Peer Review committee for arsenic research: Carcinogenesis Section, U.S. Environmental Protection Agency – NHEERL, and is currently a member of the NRC-NAS Committee on Assessing Human Health Risks of TCE and the Biological Exposure Indices Committee of the American Conference of Governmental Industrial Hygienists. Currently Dr. Yager develops, manages, and provides scientific oversight for research programs and projects. Results of research funded by EPRI including that on arsenic toxicology, pharmacokinetics, and mechanisms of action are regularly published in the peer-reviewed literature. She has served as president and member of the executive committee of the Genetic and Environmental Toxicology Association, and on the Board of Councilors of the Environmental Mutagen Society and is a member of a number of additional scientific societies. Dr. Yager is author or co-author of more than 50 publications in peer-reviewed journals, proceedings and book chapters.